

**FACT SHEET FOR
STATE WASTE DISCHARGE
PERMIT NO. ST-9238**

**Gold Digger Apples, Inc.
dba Gold Digger Cellars**

SUMMARY

Gold Diggers Cellars is a new facility located in Oroville, Washington. The parent company, Gold Digger Apples Inc., has been located in Oroville for some time

This facility is not subject to categorical pretreatment standards. Gold Digger Cellars began operating the facility and discharging to the Publicly Owned Treatment Works, POTW, in 2001. The first two years of operation were in essence startup and exploratory in nature with very low discharge rates. The 2003 crush season was the first year of expanded commercial level production. It was at that time that the Town of Oroville's POTW experienced negative impacts in the form of reduced settleability in the mixed liquor. The high level of BOD entering the system from the Gold Digger effluent was suspected to be the cause of that negative impact.

Gold Digger has applied for a State Wastewater Discharge Permit. The limitations of the permit will be based on a Memorandum of Understanding, MOU, negotiated between Gold Digger and the Town of Oroville. The MOU will be contained in Appendix A of the Permittee's Operation and Maintenance Manual. In the event a new MOU is negotiated, the approved MOU will be placed in Appendix A of the O&M Manual which will then constitute the new enforceable limitations of the permit.

It is recognized that the first year or two of operation will require Gold Digger and the POTW to work closely in characterizing the Gold Digger effluent toward developing limitations or rates of discharge to avoid negative impacts at the POTW. Therefore the monitoring requirements contained in condition S.2. of the permit may be modified after one year upon request by the Permittee and subject to Departmental approval following consultation with the Town of Oroville.

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INTRODUCTION

This fact sheet is a companion document to the Draft State Waste Discharge Permit No. ST-9117. The Department of Ecology (the Department) is proposing to reissue this permit, which will allow discharge of wastewater to the Town of Oroville POTW. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the State is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities, which discharge into public waters of the State. Regulations adopted by the State include procedures for issuing permits and establish requirements which are to be included in the proposed permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A -- Public Involvement Information.

This fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. This fact sheet will not be revised. Changes to the proposed permit will be addressed in Appendix C -- Response to Comments.

GENERAL INFORMATION	
Applicant	Gold Digger Apples Inc.
Facility Name and Address	Gold Digger Cellars PO Box 2550 1010 Appleway St. Oroville, WA 98844
Type of Facility:	Winery
Facility Discharge Location	Latitude: 48° 56' 18" N Longitude: 119° 26' 19" W
Treatment Plant Receiving Discharge	Town of Oroville
Responsible Official	Mike Buckmiller – Wine Maker (509) 476-2898

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

The facility, containing a small scale winery, is not subject to categorical pretreatment standards. Gold Digger Cellars began operating the facility and discharging to the Oroville POTW in 2001. 2003 was the first year discharge approached expected operational levels. Gold Digger Cellars applied for a State Wastewater Discharge Permit in 2004. Gold Digger estimates that at full production they will process 150 tons of grapes per year producing 20,000 gallons of wine.

The facility operates eight hours a day, 5 days a week for 52 weeks of the year. The estimated daily wastewater discharge during the peak, crush season, is 695 gpd. The crush season normally occurs in the months of October, November and December. The remaining portion of the year is devoted to maintenance with some production associated activities e.g. vat cleaning and bottle washing occurring sporadically. During the non-crush season the estimated wastewater discharge is 300 gpd.

History

In 2001 the facility began producing small experimental quantities of wine. In 2003 Gold Digger Cellars began to produce product in larger quantities. During grape crush in fall of 2003 the POTW was adversely impacted. Evidently the Biological Chemical Oxygen Demand, BOD, load to the POTW of that season's discharge had promoted the growth of filamentous bacteria, which has a negative effect on the settelability of the mixed liquor. This can lead to a lowering of the quality of the effluent from the POTW.

Gold Digger Cellars application for a State Wastewater Discharge Permit was received on December 11, 2003. A temporary permit was issued and became effective on February 23, 2004.

Industrial Processes

White wine is produced on site in the following manner. Grapes are crushed and the juice is allowed to settle for a time. The relatively clear juice is decanted to another tank for fermentation. The remaining juice and grape mixture is allowed to settle further and depending on the condition of the supernatant additional juice is transferred to the fermentation tank. The remaining grape skins, pomace, and other solids are removed and tilled into the vineyard.

Following fermentation the clear wine is carefully racked, a process where the clearest liquid is decanted from the top of the vat or barrel. The wine goes through a series of rackings to extract clear wine from the process. The remaining wine, yeast and other solids in the sludge, lees, are allowed to settle. The bulk of the sludge is transported to the fields and the liquid and dead yeast is discharged to the POTW.

Red wine is made through a process of maceration and fermentation. The crushed grapes and juice are fermented together. This gives the wine its color from release of the tannic acids contained in the grape skins. Following fermentation and transfer of the wine to barrels for aging the pomace is pressed to a high solids condition and tilled into the vineyard. The pressate is discharged to the POTW.

The above processes generate the heaviest BOD load. During the course of the year other activities such as bottling, barrel washing, and vat cleaning will at times generate some level of BOD loading to the effluent. Routine maintenance and housekeeping activities are not expected to contribute any appreciable levels of BOD to the effluent.

All vats and floor drains are piped directly to the sedimentation cells for treatment and ultimate discharge to the POTW.

Treatment Processes

The treatment process consists of a simple series of sedimentation chambers. There are no chemical additives used in the process. The building houses a large open three chambered concrete settling containment. Each chamber has an estimated holding capacity of 300 to 400 gallons. The third chamber is piped to an outside three chambered, aboveground concrete septic tank. Each chamber is equipped with a lid for cleaning access. To mitigate excessive BOD loading at the POTW, the Permittee is required to notify the POTW prior to any discharges associated with grape crush. The POTW will then make a determination as to the rate of effluent discharge the Permittee will be allowed. The Permittee is required to work closely with the POTW to allow the POTW to adaptively manage the BOD loading to avoid negative impacts at the treatment plant.

PERMIT STATUS

The previous permit for this facility was a Temporary Permit issued on February 23, 2004

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on April 16, 2004. The facility is clean and well maintained.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge was characterized as follows in the permit application received December 11, 2003. This characterization is typical of a non-crush, routine maintenance type discharge. The below characterization is based on a one time sampling event. Therefore minimum, maximum and average values are not available.

Parameter	Value	Parameter	Value
BOD (5 day)	< 5 mg/L	Cadmium	< 0.3 µg/L
Total Suspended Solids	29.5 mg/L	Chromium	< 4.7 µg/L
pH	7.37 S.U.	Lead	< 0.5 µg/L
Total Sulfate	131 mg/L	Copper	< 2.0 µg/L
Chloride	10.2 mg/L	Zinc	< 20.0 µg/L
Residual Chlorine	< 0.05 mg/L	Nickel	< 10.0 µg/L

Typical crush wastewater on the other hand often contains greater than 3000 mg/L of BOD. Characterization of the grape crush discharge is an integral part of the proposed permit monitoring requirements.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable methods of prevention, control and treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect the Oroville POTW from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary. These limitations are based on local limits established by the Oroville POTW. Presently the only limitations in effect are that the Permittee consult with the City prior to crush discharge and during discharge follow any schedule established for the discharge by the City. In addition, pH shall be between 5 and 11 at all times.

Gold Digger Cellars is a new operation, which has not as yet been able to establish its wastewater load characteristics. The Permittee and the Town of Oroville are expected to determine appropriate limits based upon empirical evidence and reasonable projections. Appendix A of the Operations and Maintenance Manual will contain the Departmental approved MOU negotiated between the Town of Oroville and Gold Digger Cellars. The MOU outlines the conditional discharge limitations for Gold Digger Cellars. These limitations constitute the enforceable limitations of the proposed permit. If during the proposed permit cycle a subsequent MOU is renegotiated between the Town of Oroville and Gold Digger Cellars the newly approved MOU shall be placed in Appendix A of the Permittee's O & M Manual, which will then constitute the new enforceable limits of the permit

The pH of the effluent is required to be within the range of 5 to 11 at all times.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-216-110 and 40 CFR 403.12 (e), (g), and (h)).

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S4. as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

The proposed permit requires submission of an O & M Manual for the entire wastewater system.

SPILL AND SLUG DISCHARGE PREVENTION AND CONTROL PLAN

The proposed permit requires the Permittee to develop and implement a combined Spill and Slug Discharge Prevention and Control Plan for preventing the accidental release of pollutants to State waters and/or the POTW for minimizing damages if such a discharge occurs.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances, which cause pass-through or interference; pollutants, which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the State from leachate of solid waste.

The proposed permit requires, under authority of RCW 90.48.080, that the Permittee develop and submit to the Department a solid waste plan to prevent solid waste from causing pollution of waters of the State. The plan may also need to be submitted to the local solid waste permitting agency for approval.

GENERAL CONDITIONS

General Conditions are based directly on State laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this proposed permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

The proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for 5 years.

APPENDIX A -- PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on January 15, and January 22, 2004 in the Oroville Gazette to inform the public that an application had been submitted and to invite comment on the issuance of this permit.

The Department published a Public Notice of Draft (PNOD) on June 3, 2004 in the Oroville Gazette to inform the public that a draft permit and fact sheet were available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and the reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 509/457-7105, or by writing to the address listed above.

This permit and companion fact sheet were written by Richard Marcley.

APPENDIX B -- GLOSSARY

AKART--An acronym for "all known, available, and reasonable methods of prevention, control, and treatment" and includes best management practices as may be stipulated by the Department.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards --National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal

facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Engineering Report--A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference--A discharge which, alone or in conjunction with a discharge or discharges from other sources, either: (1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; or (2) therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal.

Local Limits--Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through--The discharge of pollutants through a municipal sewerage system into waters of the State in quantities or concentrations which are a cause or significantly contribute to a violation of any requirement of water quality standards for waters of the State of Washington, or of the NPDES permit or State waste discharge permit, including an increase in the magnitude or duration of the violation.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)--Industrial dischargers to a POTW that have effluent limitations defined in a category (40 CFR 403.6 and 40 CFR Chapter I, subchapter N). However, the control authority may make a determination that even though an industrial user belongs to a category that has effluent limits for pretreatment, that industry is not a significant industrial because there is no reasonable potential for affecting the POTW's operation. A SIU may also be any other industrial user that: 1. discharges an average of 25,000 gallons per day or more of process water, 2. makes up more than 5 percent of the average hydraulic flow (dry weather) or 5 percent of the organic capacity of the plant, or 3. the control authority believes has a reasonable potential to adversely affect the POTW's operation.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters--Lakes, rivers, ponds, streams, wetlands, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the State of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria--A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids--That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

APPENDIX C -- RESPONSE TO COMMENTS

No comments were received by the Department of Ecology.